



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,551	11/15/2001	Yoshinobu Takano	216011US3	7537
22850	7590	04/16/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			KNAUSS, SCOTT A	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,551

Applicant(s)

TAKANO ET AL.

Examiner

Scott Alan Knauss

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/6/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6,9-16 and 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-6,9-16 and 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendments/Arguments

1. Applicant's amendment and response filed 2/6/04 has been entered and considered by the examiner, but has not been found persuasive for the following reasons. Therefore, the rejection is made **FINAL**.

Applicant is arguing in the response that it would not be obvious to include plastic fibers in the cables of Tanji and Fujikura because the plastic fibers cited by the examiner have high attenuation, and are therefore used in short distance applications, and therefore would not be used in the cables of Tanji and Fujikura, because they are used for longer distances.

The examiner disagrees. The prior art plastic fibers cited in the Final Rejection mailed 5/7/03 were not meant to be an exhaustive list of plastic fibers usable in such cables. The applicant has essentially admitted that longer distance plastic fibers exist, citing JP 8-5848 in page 9, lines 16-18 of the specification as type of long distance plastic optical fiber suitable for use in cables having a slotted spacer as an example of a longer distance type optical fiber. Since the Yoike reference qualifies as prior art under USC 103, the examiner submits that it would have been obvious to one of ordinary skill in the art to use fibers of the type disclosed by Yoike in the cables disclosed by Tanji and Fujikura, since these fibers are suitable for longer distance applications and thus could be used in cables having slotted spacers.

Applicant further argues that there is no suggestion in the prior art to modify the teachings of Tanji and Fujikura, and further that examiner is using "hindsight" and "obvious to try" to improperly modify the prior art references.

Once again, the examiner disagrees. It is the examiners opinion that one of ordinary skill in the art, having knowledge of the inherent advantages of plastic fibers (i.e. greater bend resistance, greater impact strength, greater ease of handling, and high bonding efficiency at connector portions thereof, ease of cutting), and further having knowledge of longer distance type plastic optical fibers would certainly have been motivated to employ such fibers in the cables disclosed by Tanji and Fujikura, in order to produce a cable which is more flexible, easy to handle, and easy to cut.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 3,4,9,10 and 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 8-160231 (Fujikura).

Regarding claims 3,4,9 and 10, Fujikara discloses in fig. 2:

An optical fiber cable containing a plurality of fibers, the fibers being placed in slots of a spacer #11.

Removing a covering #13 of the cable at a single portion of the cable

Cutting a desired fiber #12 in the cable (see also [0013] of translation) at the single portion without cutting the cable in its entirety, at a non-terminal portion of the cable, to form a terminal of the fiber.

Wherein the fiber #12 is cut, and is made to withdraw from the cable (see [0013])

Fujikara does not, however disclose the use of plastic optical fibers in the cable. However, Fujikara does not limit the types of fibers which can be used in the cable. Since the advantages of plastic fibers, e.g. - greater bend resistance, greater impact strength, greater ease of handling, and high bonding efficiency at connector portions thereof – are well known in the art, and furthermore, longer distance type plastic fibers are known in the art (see arguments above), it would have been quite obvious to one of ordinary skill in the art to substitute such plastic fibers into the branching arrangements and cables disclosed by Fujikara in order to provide short distance fiber links which have greater flexibility and ease of handling. Further, it has been held to within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claim 4, Fujikura further discloses the fiber being cut without cutting the spacer (see [0017])

Regarding claim 9, the method is a post branching method (see [0008]) and the desired fiber is cut and withdrawn from the cable, as previously mentioned.

Regarding claim 10, the method is a post branching method and the fiber is cut without cutting the spacer as described above.

Art Unit: 2874

Regarding claims 21-23,26-28,31-33, and 36-38, neither Tanji nor Fujikura discloses extending the desired fiber by at least 0.2% or 2.0% or at most 5.0%

At the outset, the examiner submits that the use of these percentages is unclear, because it is not clear from the specification or claims what these percentages represent – i.e. what they are a percentage OF. Further, as plastic optical fibers are well known to have greater flexibility as one of their advantageous properties, the examiner submits that merely adjusting the extension amount of the fibers amounts to a mere change of form with regard to the prior art. It has been held that more than a mere change of form or rearrangement of parts is necessary for patentability (*Span-Deck Inc. v. Fab –Con Inc*), 215 USPQ 835. Further, nowhere in the specification can the examiner find any criticality for the extension amount of the fiber, so it is unclear to the examiner how this can constitute an inventive feature.

Therefore, the examiner submits it would have been obvious to one of ordinary skill in the art to provide the invention of Fujikura with the extension amounts claimed by the applicant, as such extension amounts would have involved a mere change in form or rearrangement of parts disclosed by Fujikura. Furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 205 USPQ 215).

Regarding claims 24,25,29,30,34,35,39 and 40, neither Tanji nor Fujikura discloses an exact length of cable covering that is removed, either between 10 and 40 cm or between 20 and 30 cm.

Nevertheless, once again, applicant is claiming a mere change in form of an existing prior art component. As set forth above, more than a mere change of form or rearrangement of parts is necessary for patentability. As such, since there is no stated criticality for these particular values, the examiner submits that it would have been obvious to one of ordinary skill in the art to modify Fujikura to have the claimed length of cable covering removed as such a modification would have involved a mere change in size of an existing component. Furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (In re Boesch)

4. Claims 5,6,11-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujikara as modified above in view of 2000-19333 (Tanji).

Regarding claim 5, Fujikara, as modified above, discloses an optical fiber cable with all the limitations set forth in the claim, but does not explicitly disclose a tension member, the desired fiber being cut without cutting the tension member.

Nevertheless, it is well known in the art to provide slotted spacers #11 of the type disclosed by Fujikara with a central tension member. One example of such a configuration is disclosed by Tanji in figs. 1B and 2B, which has a slotted spacer #12 with a central tension member #11. The use of such a tension member is desirable because it imparts extra strength to a fiber optic cable.

Therefore it would have been obvious to one of ordinary skill in the art to provide a tension member within the spacer of Fujikara as disclosed by Tanji for the purpose of

Art Unit: 2874

providing a strong fiber optic cable. If Fujikara is thus modified, it is clear from the disclosure of Fujikara that, since the slotted member is not cut (see [0017]) the tension member would also not be cut, since it would reside inside the spacer.

Regarding claim 6, Fujikara further discloses that it is not necessary to bend the cable at the time of ejection of the fiber (see [0010]) thus, the tension member would not be elastically deformed, the fiber being cut to form a terminal of the fiber.

Regarding claim 11, as discussed above, Fujikara, discloses all the limitations of the claim as set forth regarding claim 5, and also discloses that the method is a post branching method (see [0008])

Regarding claim 12, Fujikara further discloses that it is not necessary to bend the cable at the time of ejection of the fiber (see [0010]) thus, the tension member would not be elastically deformed, the fiber being cut to form a terminal of the fiber.

Regarding claim 13, the cable is shown in extended form in figs. 1 and 2.

Regarding claim 15, the fiber #12 is cut, and is then withdrawn from the cable (see [0013])

Regarding claim 16, the cable is provided with a slotted spacer #11, the fiber being cut without cutting the spacer (see [0017])

Regarding claim 17, this claim appears to be redundant since its limitations are encompassed by claim 11, and is rejected because Fujikara, as modified, discloses cutting a fiber without cutting a tension member.

Art Unit: 2874

5. Claims 4-6,11-14,16 ~~and 17~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanji.

Regarding claims 5,6,11,12 ~~and 17~~ Tanji discloses a method comprising:

An optical fiber cable containing a plurality of fibers, the fibers being placed in slots of a spacer #12,

Removing a covering #1 of the cable at a single portion of the cable

Cutting a desired fiber #4 in the cable (see [0011]) at the single portion without cutting the cable in its entirety, at a non-terminal position of the cable, to form a terminal of the fiber.

Wherein the branching method is a post-branching method (see abstract), and wherein the cable is provided with a tension member #11, and the desired fiber is cut without cutting or elastically deforming the tension member

Tanji does not, however, disclose the use of plastic optical fibers in the cable. However, Fujikara does not limit the types of fibers which can be used in the cable. Since the advantages of plastic fibers, e.g. - greater bend resistance, greater impact strength, greater ease of handling, and high bonding efficiency at connector portions thereof – are well known in the art, and furthermore, longer distance type plastic fibers are known in the art (see arguments above), it would have been quite obvious to one of ordinary skill in the art to substitute such plastic fibers into the branching arrangements and cables disclosed by Fujikara in order to provide short distance fiber links which have greater flexibility and ease of handling. Further, it has been held to within the

Art Unit: 2874

general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claim 13, the cable is in an extended state

Regarding claim 14, the fiber is withdrawn (taken out) and then cut (see [0011])

Regarding claims 4 and 16, the cable is cut without cutting the spacer (see [0011])

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Knauss whose telephone number is (703) 305-5043. The examiner can normally be reached on 9-5 Monday-Friday.

Art Unit: 2874

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308 - 4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Scott Knauss

Art Unit 2874

sak



HEMANG SANGHAVI
PRIMARY EXAMINER